



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 077 488 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
23.05.2001 Bulletin 2001/21

(51) Int Cl.7: **H01L 23/40**, H01L 23/48,
H02H 7/08, H05K 7/20

(43) Date of publication A2:
21.02.2001 Bulletin 2001/08

(21) Application number: **00306990.3**

(22) Date of filing: **16.08.2000**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

- **Larranaga, Javier Ignacio**
Bristol, Connecticut 06010 (US)
- **Criniti, Joseph**
New Britain, Connecticut 06052 (US)
- **Pitzen, Charles S.**
Farmington, Connecticut 06032 (US)
- **Santos, Esteban**
Farmington, Connecticut 06032 (US)

(30) Priority: **16.08.1999 US 374786**

(71) Applicant: **GENERAL ELECTRIC COMPANY**
Schenectady, NY 12345 (US)

(74) Representative: **Goode, Ian Roy et al**
GE LONDON PATENT OPERATION,
Essex House,
12/13 Essex Street
London WC2R 3AA (GB)

(72) Inventors:

- **Vicente, Nathaniel Barbosa**
Bridgeport, Connecticut 06606 (US)
- **Kim, Edward Eungyun**
Burlington Connecticut 06031 (US)

(54) **Thermally efficient motor controller assembly**

(57) An arrangement for connection between motor controller electronic components and silicone controlled rectifiers (SCR) (29) contained within the controller circuit is presented with line and load straps (15, 16) being arranged on the bottom surface of the motor controller

compartment at opposite ends thereof. The SCR's (29) are positioned under the compartment on an elongated heat-sink support plate (18). Intermediate block connectors (22) interconnect the SCR's (29) with the controller line and load straps (15, 16).

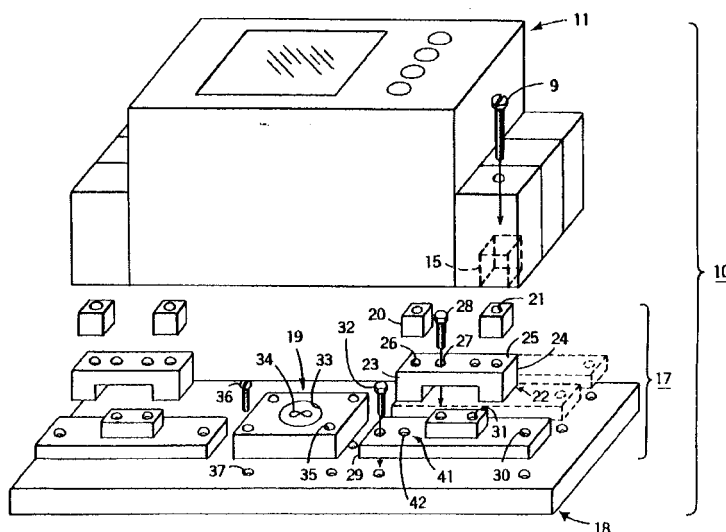


FIG. 2

EP 1 077 488 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 30 6990

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	US 5 610 493 A (WIELOCH CHRISTOPHER J) 11 March 1997 (1997-03-11) * figures 1,2,5-8 * * column 3, line 31 - column 4, line 6 * * column 6, line 30 - column 8, line 55 * ---	1-10	H01L23/40 H01L23/48 H02H7/08 H05K7/20
A	EP 0 376 498 A (YORK INT CORP) 4 July 1990 (1990-07-04) * figures 3-6 * * column 7, line 47 - column 10, line 37 * ---	1-10	
A	US 4 769 557 A (HOUF ROBERT E ET AL) 6 September 1988 (1988-09-06) * figures 1-3 * * column 2, line 25 - column 4, line 61 * ---	1-10	
A	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 03, 27 February 1998 (1998-02-27) -& JP 09 289282 A (OMRON CORP), 4 November 1997 (1997-11-04) * abstract; figures 1-6 * ---	1-10	
A	US 4 618 817 A (HOLTSLANDER ROGER A) 21 October 1986 (1986-10-21) * figures 1,2 * * column 2, line 53 - column 3, line 53 * -----	2-4,8-10	H01L H05K
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 2 April 2001	Examiner Polesello, P
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 1503 03.92 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 30 6990

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

02-04-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5610493 A	11-03-1997	NONE	
EP 0376498 A	04-07-1990	US 4895005 A	23-01-1990
		AU 616077 B	17-10-1991
		AU 4553289 A	05-07-1990
		DE 68911892 D	10-02-1994
		DE 68911892 T	19-05-1994
		JP 2843626 B	06-01-1999
		JP 3003685 A	09-01-1991
		KR 146342 B	01-10-1998
US 4769557 A	06-09-1988	NONE	
JP 09289282 A	04-11-1997	NONE	
US 4618817 A	21-10-1986	CA 1274875 A	02-10-1990